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| 09/688,017 | 10/13/2000 | Peter S. Lu | 20054-001110US | 7473 |

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EXAMINER

DECLoux, AMY M

| | |
|----------|--------------|
| ART UNIT | PAPER NUMBER |
|----------|--------------|

1644

DATE MAILED: 11/19/2002

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/688,017

Applicant(s)

LU ET AL.

Examiner

Amy M. DeCloux

Art Unit

1644

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 03 September 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-7 and 23-37 is/are pending in the application.
- 4a) Of the above claim(s) 1-7, 27-30 and 35-37 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 23-26 and 31-34 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ 6) ☐ Other: _____

DETAILED ACTION***Election/Restrictions***

Applicant's election with traverse of Group VII, claims 23-26 and newly added claims 31-34, in Paper No. 10, filed 9-3-02, is acknowledged. The traversal is on the ground(s) that the search of the claims in Groups I, II and VIII will be largely coextensive with the search of the claims in Group VII. The traversal also is based on the assertion that the base claims from Group VIII involve performing the identical method as described in independent claim 23 of Group VII, with the addition of an additional element. This is not found persuasive because though a search of group VII will overlap the search of the claims in Groups I, II and VIII, the searches are not coextensive. Furthermore, contrary to Applicant's assertion that the base claims from Group VIII involve performing the identical method as described in independent claim 23 of Group VII, with the addition of an additional element, the method of Group VIII contains a different endpoint from that of Group VII, a different resolution step from that of Group VII, and other ingredients additional to those encompassed by Group VII. Therefore Groups VII is patentably distinct from Group VIII, as well as from Groups I and II. Because a search in the non-patent literature of any of these distinct inventions would not be co-extensive with a search of the others, an examination and search of two or more inventions in a single application would constitute a serious undue burden on the Examiner, restriction for examination purposes as indicated is proper.

The requirement is still deemed proper and is therefore made FINAL.

Claims 1-7, 27-30 and 35-37 have been withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to a nonelected invention, there being no allowable generic or linking claim. Applicant timely traversed the restriction (election) requirement in Paper No. 10, filed 9-3-02. Note: Newly added claims 35-37 are encompassed by the non-elected Group VIII.

Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

Art Unit: 1644

Specification

The disclosure is objected to because it contains an embedded hyperlink and/or other form of browser-executable code. Applicant is required to delete the embedded hyperlink and/or other form of browser-executable code. See MPEP § 608.01. See specifically on page 3, lines 3-4.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 23-26 and 31-34 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 23-26 and 31-34 are indefinite in the recitation of the phrase “detecting binding of at least one PL protein” in line 3 of claim 23, because the referred to PL protein is in the singular in line 2 of said claim, and therefore it is not clear how more than one PL protein can be detected.

Claim 25 is indefinite in the recitation of the phrase “wherein an interaction between a PDZ and more than one PL is detected” because the referred to PL protein is in the singular in line 2 of independent claim 23, and therefore it is not clear how more than one PL protein can be detected.

Claims 25 and 26 are indefinite in their recitation of the term “PDZ” and of the term “PL” because it is not clear if said terms encompass a protein or a domain.

Claims 31-34 are indefinite in the recitation of the phrase “detecting comprises deterring the amount of binding of the PL protein” because it is not clear how detecting something can comprise of deterring the amount of binding.

Claims 31-34 are indefinite because it is not clear how the resolution step recited in part C of claim 31 which involves quantitating binding and determining apparent affinity of binding, reads on the preamble of the independent claim 23 which is a method for identifying an interaction between a PDZ domain and a PL protein.

Claims 31-34 are rejected under 35 U.S.C. 112, second paragraph, as being incomplete for omitting essential steps, such omission amounting to a gap between the steps. See MPEP § 2172.01. The omitted steps are: the steps needed to determine the apparent affinity of binding between the PDZ-containing polypeptide and the PL protein.

Art Unit: 1644

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless —(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 23, 24 and 26 are rejected under 35 U.S.C. 102(b) as being anticipated by Gee et al (J. Neurosci. (Jan 1988) 18(1):128-137).

Gee et al teach a method for identifying an interaction between a PDZ domain (such as a PDZ domain from SKM1 (adult skeletal muscle sodium channels (NaCH)) or from SKM2 (adult cardiac muscle sodium channels)) and a PL protein (a PDZ Ligand protein) comprising contacting the PL protein (ie either SKM1 or SKM2) to a plurality of PDZ containing polypeptides (such as contained in detergent solubilized heart membranes) and detecting at least one PL protein (ie syntrophin), (see entire article including Figure 4), as recited in claim 23. Claim 26 is included because there is an interaction between a protein PL (ie syntrophin) and more than one PDZ (ie SKM1 and SKM2).

Gee et al also teach a method for identifying an interaction between a PDZ domain (such as a PDZ domain from SKM1 (adult skeletal muscle sodium channels (NaCH)) or from SKM2 (adult cardiac muscle sodium channels)) and a PL protein (a PDZ Ligand protein) comprising contacting the PL protein (ie either SKM1 or SKM2) to a plurality of PDZ containing polypeptides (such as alpha-1 syntrophin, beta-1 syntrophin, or beta-2 syntrophin) organized in an array such as in different lanes of a blot, (see entire article, especially Figure 5B), as recited in claim 24.

Therefore, the referenced teachings anticipate the claimed invention.

Conclusion

No claim is allowed.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Amy M. DeCloux whose telephone number is 703 306-5821. The examiner can normally be reached on M-F 8:00-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Christina Chan can be reached on 703 308-3973. The fax phone numbers for the organization where this application or proceeding is assigned are 703 305-3014 for regular communications and 703 872-9307 for After Final communications.

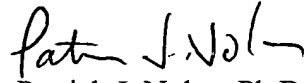
Application/Control Number: 09/688,017

Page 5

Art Unit: 1644

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703 308-0196.

Amy DeCloux, Ph.D.
Patent Examiner,
November 13, 2002


Patrick J. Nolan, Ph.D.
Primary Patent Examiner,
Group 1640